

WHAT IS CLAIMED IS:

1. A resin encapsulating apparatus comprising:  
a retaining section for retaining a semiconductor device;

a mask set on the semiconductor device and having an opening at which part of the semiconductor device is exposed;

an extruding section for extruding a fluidizing resin into the opening of the mask;

a first drive section for driving the extruding section;

a squeegee for causing a movement of the fluidizing resin present over the opening which is extruded from the extruding section into the opening; and

a second drive section for driving the squeegee.

2. A resin encapsulating apparatus according to claim 1, wherein the first drive section drives the extruding section to be moved over the opening and, during the movement of the extruding section, the extruding section dropwise supplies the fluidizing resin into the opening.

3. A resin encapsulating apparatus according to claim 1, wherein the first drive section drives the extruding section from one edge end to an opposite edge end of the opening and, during the movement of the extruding section, the extruding section dropwise supplies the fluidizing resin into the opening.

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4. A resin encapsulating apparatus according to claim 3, wherein, when the first drive section moves the extruding section from one edge end to an opposite edge end of the opening, the second drive section drives the squeegee to be moved from behind the extruding section and from one edge end to the opposite edge end of the opening and, during the movement of the squeegee, the squeegee moves the fluidizing resin which is supplied dropwise from the extruding section.

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5. A resin encapsulating apparatus according to claim 4, wherein the first and second drive sections are comprised of the same drive section and the extruding section and the squeegee are moved by the drive section while maintaining a predetermined distance.

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6. A resin encapsulating apparatus according to claim 5, wherein the predetermined distance between the extruding section and the squeegee is longer than a distance from one edge end to the opposite edge end of the opening.

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7. A resin encapsulating apparatus according to claim 5, wherein the predetermined distance between the extruding section and the squeegee is shorter than a distance from the one edge end to the opposite edge end of the opening.

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8. A resin encapsulating apparatus for forming a protective resin sealing body on a semiconductor

device in which the resin sealing body and external connection balls are formed on the same surface side of the semiconductor device, the resin encapsulating apparatus comprising:

5           a retaining section for retaining the semiconductor device;

          a mask set on the semiconductor device and having an opening at which, when the mask is set on the semiconductor device, an area of the semiconductor device at which the resin sealing body is to be formed is exposed;

          an extruding section for extruding a fluidizing resin into the opening of the mask;

          a first drive section for driving the extruding section;

          a squeegee for causing a movement of the fluidizing resin present over the opening which is extruded from the extruding section into the opening; and

          a second drive section for driving the squeegee.

20           9. A resin encapsulating apparatus according to claim 8, wherein the first drive section drives the extruding section to be moved over the opening and, during the movement of the extruding section, the extruding section dropwise supplies the fluidizing resin into the opening.

25           10. A resin encapsulating apparatus according to claim 8, wherein the first drive section drives the

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extruding section and moves the extruding section from one edge end to an opposite edge end of the opening and, during the movement of the extruding section, the extruding section dropwise supplies the fluidizing resin into the opening.

11. A resin encapsulating apparatus according to claim 9, wherein, when the first drive section moves the extruding section from one edge end to the opposite edge end of the opening, the second drive section drives the squeegee to be moved from behind the extruding section and from one edge end to the opposite edge end of the opening and, during the movement of the squeegee, the squeegee moves the fluidizing resin which is supplied dropwise from the extruding section.

12. A resin encapsulating apparatus according to claim 11, wherein the first and second drive sections are comprised of the same drive section and the extruding section and the squeegee are moved by the drive section while maintaining a predetermined distance.

13. A resin encapsulating apparatus according to claim 12, wherein the predetermined distance between the extruding section and the squeegee is longer than a distance from the one edge end to the opposite edge end of the opening.

14. A resin encapsulating apparatus according to claim 12, wherein the predetermined distance between

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the extruding section and the squeegee is shorter than a distance from the one edge end to the opposite edge end of the opening.

15. A resin encapsulating method comprises the steps of:

retaining a semiconductor device;

setting an opening-equipped mask on the semiconductor device and exposing part of the semiconductor device;

10 extruding a fluidizing resin into the opening of the mask; and

moving a squeegee over the opening of the mask to cause a movement of the fluidizing resin present over the opening which is extruded into the opening.

15 16. A resin encapsulating apparatus according to claim 15, wherein the step of extruding the fluidizing resin comprises dropwise supplying the fluidizing resin while moving an extruding section extruding the fluidizing resin from one edge end to the opposite edge end of the opening.

20 17. A resin encapsulating apparatus according to claim 16, wherein, when the extruding section is moved from one edge end to the opposite edge end of the opening, the squeegee is moved from behind the extruding section and from the one edge end to the opposite edge end of the opening and, during the movement of the squeegee, the squeegee moves the

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fluidizing resin which ~~is~~ supplied dropwise from the extruding section.

18. A resin encapsulating method for forming a protective resin sealing body in which the resin sealing body and external connection balls are formed on the same surface side of the semiconductor substrate, the method comprising the steps of:

retaining the semiconductor substrate;

setting an opening-equipped mask on the semiconductor device and exposing, from the opening, an area of the semiconductor device at which the resin sealing body is to be formed;

extruding a fluidizing resin into the opening of the mask; and

moving a squeegee over the opening of the mask to cause a movement of the fluidizing resin present over the opening which is extruded into the opening.

19. A resin encapsulating method according to claim 18, wherein the extruding step comprises dropwise supplying the fluidizing resin while moving an extruding section extruding the fluidizing resin from one edge end to on opposite edge end of the opening.

20. A resin encapsulating apparatus according to claim 19, wherein, when the extruding section is moved from one edge end to the opposite edge end of the opening, the squeegee is moved from behind the extruding section and from the one edge end to the

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opposite edge end of the opening and, during the movement of the squeegee, the squeegee moves the fluidizing resin which is supplied dropwise from the extruding section.

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